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10/518,227

10/17/2005

Arkady Garbar

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EXAMINER

NGUYEN, TRI V

ART UNIT

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1796

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/518,227 | Applicant(s) GARBAR ET AL. | |
| | Examiner TRI V. NGUYEN | Art Unit 1796 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 35-53 is/are pending in the application.
- 4a) Of the above claim(s) 43 and 47 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 35-42, 44-46 and 48-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

- (a) the species of a jet mill or disperser and homogenizer;
- (b) the species of basic or acidic leaching agent.

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

The claims are deemed to correspond to the species listed above in the following manner:

- (a) claims 42 (jet mill) and 43 (disperser and homogenizer);
- (b) claims 46 (basic leaching agent) and 47 (acidic leaching agent).

The following claim(s) are generic: 35-41, 44, 45 and 48-53.

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: the de-agglomeration means are of different

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technical features as the mechanical means and apparatus differ in the functional behavior and the basic and acidic behavior of the leaching are directed to differing technical features of the chemical behavior in a chemical process and synthesis.

During a telephone conversation with Dorothy Whelan on 01/06/08 a provisional election was made with traverse to prosecute the invention of the species of (a) jet mill and (b) basic leaching agent, claims 42 and 46 respectively. Affirmation of this election must be made by applicant in replying to this Office action. Claims 43 and 47 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102 & 103

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 35, 36, 38, 39, 41, 44, 45, 48, 50-53 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Lin (US 4,668,355).

Lin teaches the process of making particles by treating an alloy of two or three different metals such as copper, nickel, copper, gold with cold work, strip treatment, thermal treatment, leaching agents. Lin further teaches the features of passivating the particles, de-agglomeration and washing prior to collecting the particles. See col 4, line 20 to col. 6, line 57; col 7, lines 27-37 and example 1 on col 8.

Accordingly, the reference of Lin anticipates the material limitations of the listed claims.

In the alternative that the above disclosure is insufficient to anticipate the above listed claims such as selection of a specific ingredient or element step, it would have nonetheless been obvious to the skilled artisan to achieve the synthesis methodology, as the reference teaches each of the claimed ingredients for the same utility and such modifications are recognized as being well within the purview of the skilled artisan to yield predictable results.

Claim Rejections - 35 USC § 103

4. Claims 37 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin.

Lin disclose the process of making the particles but however, fails to specifically disclose a process comprising the experimental conditions such as temperature ranges in the amounts as those recited by the Applicant.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the portion of the prior art's range which is within the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for

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the best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the *prima facie* case of obviousness. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). In addition, a *prima facie* case of obviousness exists because the claimed ranges “overlap or lie inside ranges disclosed by the prior art”, see *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976; *In re Woodruff*, 919 F.2d 1575, 16USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2131.03 and MPEP 2144.05I. The claim would have been obvious because a particular known technique was recognized as part of the ordinary capabilities of a skilled artisan. It would have been obvious to a skilled artisan in the nanotechnology art to perform experimental conditions optimization is recognized as part of the ordinary capabilities of the skilled artisan.

5. Claims 42, 46 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin as applied to the claims above, and further in view of Khasin et al. (US 6,012,658 that also incorporates by reference US 5,476,535).

Lin discloses the process of making the particles via a leaching agent but does not explicitly disclose the features of silver based particles, jet mill and basic leaching agent. In an analogous art, Khasin et al. disclose the process of making silver based nanoparticles via the formation of an alloy followed by leaching with a basic ingredient and using a jet mill (col 3, lines 20-35 and patent '535: col 2, lines 20-52). The claim would have been obvious because a particular known technique was recognized as part of the ordinary capabilities of a skilled artisan. It would have been obvious to a skilled artisan in the nanotechnology art to perform

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experimental conditions optimization is recognized as part of the ordinary capabilities of the skilled artisan.

6. Claims 41, 42 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin as applied to the claims above, and further in view of Yadav et al. (US 2004/0262435).

Lin discloses the process of making the particles via a leaching agent but does not explicitly disclose the features of a jet mill and various chemical coating reagents. In an analogous art, Yadav et al. disclose the features of a jet mill and the passivation of the surface with various chemicals such as alcohols (parag. 57-64). The claim would have been obvious because a particular known technique was recognized as part of the ordinary capabilities of a skilled artisan. It would have been obvious to a skilled artisan in the nanotechnology art to perform experimental conditions optimization is recognized as part of the ordinary capabilities of the skilled artisan.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri V. Nguyen whose telephone number is (571) 272-6965. The examiner can normally be reached on M-F 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisors, Vasu Jagannathan can be reached on (571) 272-1119 and Eric Stamber can be reached on (571) 272-6724. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tri V Nguyen/
Examiner, Art Unit 1796
February 10, 2008

/Mark Kopec/
Primary Examiner, Art Unit 1796